

## Membrane Element

## NANO-SW-4040

<b>Performance</b>	<b>MgSO<sub>4</sub></b>	
	Permeate Flow (Nominal):	2000 gpd (7.6 m <sup>3</sup> /d)
	MgSO <sub>4</sub> Rejection (Nominal):	99.8% (99.6% minimum)
<b>Type</b>	Configuration:	Spiral Wound
	Membrane Polymer:	Composite Polyamide
	Nominal Membrane Area:	75 ft <sup>2</sup> (7 m <sup>2</sup> )
	Feed/Brine Spacer Thickness:	34 mil (0.87 mm) HYDRAblock™ Technology
<b>Application Data<sup>^</sup></b>	Maximum Applied Pressure (Allowed):	1200 psig (8.27 MPa)
	Maximum Applied Pressure (Recommended)*:	600 psig (4.16 MPa)
	Maximum Chlorine Concentration:	< 0.1 PPM
	Maximum Operating Temperature:	113 °F (45 °C)
	pH Range, Operation (Cleaning):	3.0 - 9.0 (1.0 – 11.5) <sup>^</sup>
	Maximum Feedwater Turbidity:	1.0 NTU
	Maximum Feedwater SDI (15 mins):	5.0
	Maximum Feed Flow:	16 GPM (3.6 m <sup>3</sup> /h)
	Minimum Ratio of Concentrate to Permeate Flow for any Element:	5:1
	Maximum Pressure Drop for Each Element:	15 psi
	Typical Seawater Performance <sup>†</sup> :	
Nominal Permeate Flow:	1,200 gpd (4.6 m <sup>3</sup> /d)	
Nominal Chloride Rejection:	25%	
Nominal Sulfate Rejection:	99.8%	

\* Exceeding 600 psi may cause a reduction in membrane permeability.

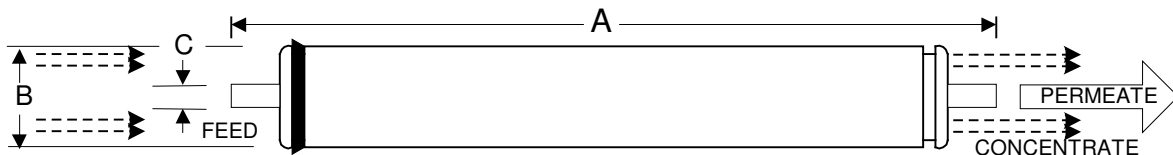
<sup>^</sup> The limitations shown here are for general use. For specific projects, operating at more conservative values may ensure the best performance and longest life of the membranes. See Hydranautics Technical Bulletins for more detail on operation limits, cleaning pH, and cleaning temperatures.

<sup>†</sup> Typical Synthetic Seawater Test Condition: 35,000 ppm NaCl + 8000 ppm MgSO<sub>4</sub>, 200 psi (1.4 MPa), 77 °F (25°C), 15% Permeate Recovery, 6.5 – 7.0 feed pH.

### Test Conditions

The stated performance is based on the following test conditions:

2000 ppm MgSO<sub>4</sub>  
 130 psi (0.9 MPa) Applied Pressure  
 77 °F (25 °C) Operating Temperature  
 15% Permeate Recovery  
 6.5 – 7.0 Feed pH



A, inches (mm)	B, inches (mm)	C, inches (mm)	Weight, lbs. (kg)
40.00 (1016)	3.95 (100.3)	0.75 (19.1)	8 (3.6)

**Notice:** Permeate flow for individual elements may vary + or - 20 percent. Element weight may vary. All membrane elements are supplied with a brine seal, interconnector, and o-rings. All membrane elements are supplied with a brine seal, interconnector, and o-rings. Elements are enclosed in a sealed polyethylene bag containing deionized water, and then packaged in a cardboard box.

Hydranautics believes the information and data contained herein to be accurate and useful. The information and data are offered in good faith, but without guarantee, as conditions and methods of use of our products are beyond our control. Hydranautics assumes no liability for results obtained or damages incurred through the application of the presented information and data. It is the user's responsibility to determine the appropriateness of Hydranautics' products for the user's specific end uses. 3/06/15